

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date:

Region: Mooresville Regional Office
County: Catawba
NC Facility ID: 1800106
Inspector's Name: Bob Caudle
Date of Last Inspection: 06/05/2018
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): HWS Company Inc. dba Hickory White</p> <p>Facility Address: HWS Company Inc. dba Hickory White 9 Lenoir Rhyne Boulevard SE Hickory, NC 28602</p> <p>SIC: 2511 / Wood Household Furniture NAICS: 337122 / Nonupholstered Wood Household Furniture Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p style="text-align: center;">Permit Applicability (this application only)</p> <p>SIP: 02D .0503, .0504, .0512, 0516, .0521, .1111, .1806 NSPS: N/A NESHAP: MACT JJ, MACT DDDD, GACT JJJJJ, GACT ZZZZ PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other:</p>
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Contact Data			Application Data
<p style="text-align: center;">Facility Contact</p> <p>Kim White Environmental Manager (828) 322-8624 9 Lenoir Rhyne Boulevard, SE Hickory, NC 28602 whitek@hickorywhite.com</p>	<p style="text-align: center;">Authorized Contact</p> <p>William Smith VP of Operations (828) 341-5815 PO Box 189 Hickory, NC 28603 smithw@sherrillfurniture.com</p>	<p style="text-align: center;">Technical Contact</p> <p>William Smith VP of Operations (828) 341-5815 PO Box 189 Hickory, NC 28603 smithw@sherrillfurniture.com</p>	<p>Application Number: 1800106.18A Date Received: 06/29/2018 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 02796/T19 Existing Permit Issue Date: 04/14/2014 Existing Permit Expiration Date: 03/31/2019</p>

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2017	0.3400	10.82	64.22	11.42	4.57	3.23	2.22 [Toluene]
2016	0.4076	8.56	79.13	10.14	10.07	3.95	2.72 [Toluene]
2015	0.5131	10.50	100.35	12.65	12.28	4.34	3.20 [Toluene]
2014	0.5200	10.25	96.73	12.52	12.72	3.18	1.78 [Toluene]
2013	0.4827	9.95	79.69	12.00	11.79	2.51	1.26 [Toluene]

<p>Review Engineer: Eric Crump</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 02796/T20 Permit Issue Date: _____ Permit Expiration Date: _____</p>
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1. Purpose of Application

HWS Company Inc. dba Hickory White (Hickory White) is a furniture manufacturing facility located in Hickory, Catawba County, North Carolina that operates under Title V permit No. 02796T19 which is set to expire on March 31, 2019. Because the renewal application was received at least nine months before the expiration date, the existing permit will remain in effect, regardless of expiration date, until this renewal application is processed.

2. Facility Description

The Hickory White facility manufactures, assembles, and finishes case good furniture. Operations at the facility include lumber drying (using a steam-heated drying oven), woodworking, and wood finishing (which includes the application of adhesives, stains, wash coats, sealers, topcoats, basecoats, and enamels in spray booths). The facility is in operation eight hours per day, five days per week, 50 weeks per year.

3. Application Chronology

April 14, 2014	Permit No. 02796T19 issued to Hickory White as Title V renewal.
July 17, 2014	Notice of compliance status for wood fuel-fired boiler (ID No. ES-1) submitted to the Compliance and Emissions Data Reporting Interface (CEDRI).
August 5, 2014	Compliance inspection conducted by Tonisha Dawson, Mooresville Regional Office (MRO). Facility appeared to be operating in compliance with all permit requirements.
August 11, 2015	Compliance inspection conducted by Tonisha Dawson, MRO. Facility appeared to be operating in compliance with all permit requirements.
December 5, 2015	North Carolina Department of Air Quality (DAQ) received a request from Hickory White for a permit applicability determination for a proposed dry abrasive blasting process at the facility.
December 16, 2015	DAQ issues determination (No. 2747) that the dry abrasive blasting process proposed for the Hickory White facility is an insignificant activity for which no air permit is required. The process must comply with the requirements under 15A NCAC 02D. 0541, "Control of Emissions from Abrasive Blasting."
September 9, 2016	Compliance inspection conducted by Tonisha Dawson, MRO. Facility appeared to be operating in compliance with all permit requirements.
August 25, 2017	Compliance inspection conducted by Bob Caudle, MRO. Facility appeared to be operating in compliance with all permit requirements.
June 5, 2018	Compliance inspection conducted by Bob Caudle, MRO. Facility appeared to be operating in compliance with all permit requirements.

July 9, 2018	DAQ acknowledges receipt of permit renewal application No. 1800106.18A from Hickory White. The application was deemed complete as of June 29, 2018.
October 22, 2019	Draft permit and permit review sent to Mark Cuilla, DAQ for review.
January 17, 2019	Final comments on draft permit and permit review provided by Mark Cuilla, DAQ.
January 18, 2019	Draft permit and permit review sent to Hickory White and MRO for review.

4. Permit Modifications and Title V Equipment Editor (TVEE) Discussion

The following table summarizes changes to the Hickory White permit resulting from the permit renewal:

Page No.	Section	Description of Changes
Cover and throughout	---	<ul style="list-style-type: none"> Updated all dates and permit revision numbers Changed all citations of 15A NCAC 2D to 15A NCAC 02D Changed all citations of 15A NCAC 2Q to 15A NCAC 02Q
5-7	2.1 A.1, 2.1 A.3	Updated to current format of 02D .0504 permit requirements
8	2.1 A.4	Updated to current format of 02D .0503 permit requirements
8	2.1 A.5	Updated to current format of 02D .0516 permit requirements
8-9	2.1 A.6	Updated to current format of 02D .0521 permit requirements
9-11	2.1 A.7	Corrected spelling of “ACHIEVABLE”; updated to current format of 02D .1111 permit requirements
12	2.1 B.1	Updated to current format of 02D .0503 permit requirements
12	2.1 B.2	Updated to current format of 02D .0516 permit requirements
12-13	2.1 B.3	Updated to current format of 02D .0521 permit requirements
13-14	2.1 C.1	Updated to current format of 02D .0512 permit requirements
14-15	2.1 C.2	Updated to current format of 02D .0521 permit requirements
15-16	2.1 E.1	Updated to current format of 02D .0512 permit requirements
16-17	2.1 E.2	Updated to current format of 02D .0521 permit requirements
18-19	2.2 A.2	Updated to current format of 02D .0317 avoidance conditions for 02D .1111
19-30	2.2 B	Updated to current format of 02Q .1111: Maximum Achievable Control Technology for 40 CFR Part 63, Subpart JJ: National Emission Standards for Wood Furniture Manufacturing Operations
	3	Updated General Conditions to version 5.3, 8/21/2018

No changes to the Title V Equipment Editor (TVEE) have been required as a result of this permit renewal.

5. Regulatory Review

The Hickory White facility's status with respect to the state regulations described here has not changed since the last permit was issued. As a result, the discussion of these regulations herein will be limited. A detailed discussion on how the emission limits for the sources were determined is provided in the permit review by Betty Gatano, DAQ dated April 14, 2014.

- 15A NCAC 02D .0503, Particulates from Fuel Burning Indirect Heat Exchangers: The two natural gas-fired boilers (ID Nos. ES-3 and ES-4) are subject to this rule. The wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2) is also subject to 02D .0503 when firing fuel oil. Using the equation for the allowable PM emissions limit in the rule, the PM emission limits for these boilers was determined to be 0.38 pounds per million Btu (lb/MMBtu) heat input.

Using emission factors for fuel oil and natural gas, the maximum PM emissions expected from the boilers are:

- No. 2 fuel oil: 0.024 lb/MMBtu
- Natural gas: 0.007 lb/MMBtu

No monitoring, recordkeeping, or reporting is required to ensure compliance for this rule. The renewal of this permit does not affect this status.

- 15A NCAC 02D .0504, Particulates from Wood Burning Indirect Heat Exchangers: The wood fired boiler (ID No. ES-1) and the wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2), when operating under its primary operating scenario, or POS (firing wood only, or wood with No. 2 fuel oil), are subject to 02D .0504, as discussed below.

Wood fired-boiler (ES-1)

Using the equation for allowable PM emissions from this rule, the PM emission limit for the wood fired boilers is 0.55 lb/MMBtu.

Wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2), operating under its POS

Allowable PM emissions from the POS are determined from the following equation:

$$Ec = \frac{0.55Q_w + 0.38Q_o}{Q_w + Q_o}$$

where, Ec = emission limit from combined fuels (pounds per million Btu heat input)

Q_w = actual wood heat input rate (Btu/hr)

Q_o = actual No. 2 fuel oil heat input rate (Btu/hr)

Hickory White has not operated boiler ES-2 since 2002 due to a downturn in business; subsequently the facility removed the boiler's piping for wood fuel. Because Hickory White plans to reinstall the piping and combust wood fuel in boiler ES-2 when economically feasible, the permit will continue to allow wood fuel to be burned in this boiler.

Particulate emissions from the wood-burning boilers are controlled with centrifugal fly ash collectors (ID Nos. CD-19 and CD-20), both without fly ash reinjection. The permit includes a requirement to test for compliance with 02D .0504 when re-commencement of firing on wood fuel. Hickory White must conduct inspection and maintenance on the control devices to ensure compliance with this rule. The permit renewal does not affect this status.

- 15A NCAC 02D .0512, Particulates from Miscellaneous Wood Products Finishing Plants – The furniture finishing operation (ID No. E-5) and the woodworking operations (ID No. E-9) are subject to 02D .0512. Hickory White has to conduct inspection and maintenance of the control devices on these sources to ensure compliance. No changes to the monitoring, recordkeeping, or reporting requirements are needed under this renewal.
- 15A NCAC 02D .0516, Sulfur Dioxide from Combustion Sources – The natural gas-fired boilers (ID Nos. ES-3 and ES-4), the wood fired boiler (ID No. ES-1), and the wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2) are subject to 02D .0516. No monitoring, recordkeeping, or reporting is required when firing natural gas, wood, or No. 2 fuel oil because of the low sulfur content of the fuels. These fuels are inherently low enough in sulfur that continued compliance is expected. No changes to the monitoring, recordkeeping, or reporting are required under this permit renewal.
- 15A NCAC 02D .0521, Control of Visible Emissions
The following equipment was manufactured and operating as of July 1, 1971 and must not have visible emissions of more than 40 percent opacity when averaged over a six-minute period, except as specified in 02D .0521(c):
 - Wood –fired boiler (ID No. ES-1)
 - Wood fuel/No. 2 fuel oil-fired boiler (ID No. ES-2)
 - Woodworking operations (ID No. ES-9) when firing wood and No. 2 fuel oil

Hickory White is required to conduct daily visible emission observations for boiler ES-1 and the wood working operations. Daily observations are also required for boiler ES-2 when firing wood. No monitoring, recordkeeping, or reporting is required when only No. 2 fuel oil is fired in boiler ES-2. This permit renewal does not affect this status. Continued compliance is expected.

The following equipment was manufactured and operating after July 1, 1971 and must not have visible emissions of more than 20 percent opacity when averaged over a six-minute period, except as specified in 02D .0521(d):

- Natural gas boilers (ID No. ES-3 and ES-4) – No monitoring, recordkeeping, or reporting is required when firing natural gas in these boilers. This permit renewal does not affect this status. Continued compliance is expected.
- Spray booths (ID Nos. SB-1 through SB-21) – Hickory White is required to conduct monthly visible emission observations and associated recordkeeping and reporting to ensure compliance. This permit renewal does not affect this status. Continued compliance is expected.
- 15A NCAC 02D .1111, Maximum Achievable Control Technology (MACT) – The facility is subject to the following MACT and generally available control technology (GACT) standards:

Source	MACT/GACT Standard
Wood fuel-fired boiler (ID No. ES-1) Wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2)	National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Industrial, Commercial, and Institutional Boilers, 40 CFR Part 63, Subpart JJJJJ
Wood finishing operations (ID No. ES-5)	NESHAP for Wood Furniture Manufacturing Operations, 40 CFR Part 63 Subpart JJ
Lumber drying operation (ID No. ES-8)	NESHAP for Plywood and Composite Wood Products, 40 CFR Part 63 Subpart DDDD
Fire Pump (ID No. I-ES-10-FP)	NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63 Subpart ZZZZ, or GACT ZZZZ

These MACTs/GACTs are discussed in further detail in section 6.

- 15A NCAC 2Q .0317, Avoidance Conditions – Hickory White has accepted an avoidance limit for 15A NCAC 02D .1111, Maximum Achievable Control Technology, which is discussed in section 6.

6. NESHAPS/MACT/GACT

Hickory White was formerly classified as a major source for hazardous air pollutants (HAP), subject to the Wood Furniture MACT (40 CFR 63 Subpart JJ) and the Plywood and Composite Wood Products MACT, (40 CFR 63 Subpart DDDD). Following the applicability of these MACTs to the facility, the Permittee accepted a MACT avoidance condition under Air Permit No. 02796T18 to become an area source for HAPs. Currently classified as an area source, Hickory White is subject to the Boiler GACT (40 CFR 63, Subpart JJJJJ) and the generally available control technology (GACT) requirements for reciprocating internal combustion engines (RICE). The facility remains subject to MACT Subpart JJ and Subpart DDDD under EPA's "Once In, Always In" policy. These requirements are discussed in further detail below.

40 CFR Part 63, Subpart JJJJJ, NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources

Wood fuel-fired boiler (ID No. ES-1) and wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2) are subject to this NESHAP. The facility has complied with the tune-up and one-time energy assessment requirements of the rule, conducted biennial tune-up, and submitted biennial compliance reports by March 1 of every other year starting March 1, 2015. The next biennial compliance report for boiler ES-1 is due March 1, 2019. As mentioned earlier, boiler ES-2 has been out of service since 2008 and will need a tune-up prior to being put back into service. Continued compliance is expected.

40 CFR Part 63, Subpart DDDD, Plywood and Composite Wood Products NESHAP

Hickory White has three lumber drying kilns subject to this NESHAP, which are no longer in operation. Per 40 CFR 63.2252 of Subpart DDDD, lumber drying kilns are not required to comply with the compliance options, work practice requirements, performance testing, monitoring, SSM plans, and recordkeeping or reporting requirements of this subpart except for the initial notification requirements. Continued compliance is expected.

40 CFR Part 63, Subpart ZZZZ, NESHAP for Stationary RICE

A No. 2 fuel oil-fired fire pump (220 brake horsepower) at the Hickory White facility is considered an existing emergency engine under subpart ZZZZ and is subject to the generally available control. The source is classified as an insignificant source under 15A NCAC 02Q .0503(8) because it has potential emissions of less than five tons per year of criteria pollutants

40 CFR Part 63, Subpart JJ, National Emission Standards for Wood Furniture Manufacturing Operations

The wood finishing operation (ID No. ES-5) is subject to subpart JJ, and includes:

- seventeen dry filter-type spray booths (ID Nos. SB-1 through SB-10, SB-12, SB-13, SB-15, SB-16, and SB-19 through SB-21)
- four baffle-type spray booths (ID Nos. SB-11, SB-14, SB-17, and SB-18)
- two wash-off tanks (ID No. ES-6)
- gluing operation (ID No. ES-7)
- one steam heated drying oven divided into multiple sections (ID No. DO-1)

Hickory White has chosen to comply with this MACT using a combination of the averaging method (i.e., by working to achieve a weighted average volatile hazardous air pollutant (VHAP) content across all coatings used) and compliant coatings method (using finishing materials containing less than or equal to a maximum VHAP content). The facility is required to submit a semi-annual report which certifies their operation. The most recent report was received on January 29, 2018.

In addition, as of November 14, 2014, subpart JJ only allows conventional spray guns to be used when all emissions from the finishing application station are routed to a functioning HAP control device. This change has been incorporated into permit condition 2.2.B for the MACT Subpart JJ sources.

7. New Source Performance Standards (NSPS)

The Hickory White facility is not currently subject to any NSPS. The permit renewal does not affect this status.

8. New Source Review (NSR)/Prevention of Significant Deterioration (PSD)

Hickory White is classified as a minor facility under PSD. This permit renewal does not affect this status.

9. Risk Management Program (Clean Air Act, Section 112(r))

40 CFR Part 68 establishes requirements for stationary sources that hold more than threshold quantities of regulated substances to develop a risk management plan (RMP), in accordance with Section 112(r) of the Clean Air Act. The RMP identifies the potential effects of a chemical accident, steps the facility is taking to prevent an accident, and emergency response procedures if an accident occurs.

The Hickory White facility is not subject to the Risk Management Program requirements because it does not store or use regulated substances in quantities that exceed the regulatory thresholds. This permit renewal with consolidated minor modification does not affect this status.

10. Compliance Assured Monitoring (CAM)

40 CFR Part 64 establishes requirements for compliance assurance monitoring (CAM). This rule applies to any pollutant specific unit that meets the following three conditions:

- the unit is subject to any (non-exempt: e.g. pre-November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- the precontrol potential emission rate for the unit exceeds either 100 tons per year for criteria pollutants, 10 tons per year of a single HAP, or 25 tons per year of multiple HAPs.

The applicability of CAM requirements to the Hickory White facility was evaluated during permit reviews by Jenny Kelvington (June 29, 2009) and Judy Lee (January 24, 2005). Both permit reviews showed the precontrolled PM₁₀ emissions for all control devices were less than 100 tons per year, negating the applicability of CAM. Because no changes have been made to the woodworking operations or boilers since the 2009 permit renewal (and the April 14, 2014 permit review by Betty Gatano documents this), the CAM status for the facility remains unchanged. This permit renewal does not affect this status.

11. Facility-wide Air Toxics

Hickory White is not currently subject to the NC Air Toxics Program. This permit renewal does not change that status.

12. Facility Emissions Review

There is no change in Title V potential emissions for this permit renewal. Actual emissions inventory results in tons per year for 2013 through 2017 are presented in the review header table above.

13. Compliance Status

The facility was last inspected on June 5, 2018 by Bob Caudle of the Mooresville Regional Office. The company appeared to be in compliance with all applicable requirements at that time. No Notices of Violation or Notices of Deficiency have been issued to Hickory White since the last permit renewal.

14. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above. South Carolina and Tennessee are affected states within 50 miles of the facility. Mecklenburg County, North Carolina, which is located within 50 miles of the facility, has a local air program that could be affected by this facility. These states and local program will be notified of this permit renewal.

15. Other Regulatory Considerations

A P.E. seal was not required for this permit renewal.

A zoning consistency determination was not required for this permit renewal

No permit fee was required for this permit renewal.

16. Recommendations

The permit application for HWS Company Inc. dba Hickory White located in Hickory, Catawba County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 02796/T20.